What is claimed is:

1. A data communication system for enabling a plurality of communication apparatuses to perform data communication via a communication medium, the data communication system comprising:

timing information sharing section configured to share timing information related to a user operation and release of user operation between devices performing mutual communication, in response to user operation and release of user operation performed at a same timing against respective connection designation section of apparatuses constituting respective counterparts for communication; and

searching section configured to search over said communication medium and specify as a communication counterpart an apparatus sharing timing information related to said user operation and said release of user operation; wherein

each of said communication apparatuses includes a user interface configured to accept a user operation, and said user operation and release of user operation related to part of said user interfaces is allocated to a connection designation section configured to designate network connections.

2. The data communication system according to claim 1, wherein said searching section collectively transmits connection request packets including timings of said user operation and said release of user operation for each of said communication apparatuses; reads timing information

related to user operation and release of user operation from a connection request packet received from other apparatuses; and compares said timing information related to user operation and release of user operation with its own timing information of user operation and release of user operation; wherein

mutual identification between apparatuses is performed upon matching carried out as a result of said comparison of timing information.

3. The data communication system according to claim 2, wherein said connection request packet further comprises time interval between user operation and release of user operation and network identification information of a transmitting counterpart.

4. The data communication system according to claim 2, wherein said connection request packet further comprises key information to be used for establishing network connection.

5. A data communication apparatus for performing data communication via a communication medium, comprising:

user interfaces configured to accept user operation;

connection designation section configured to designate network connection for user operation and release of user operation allocated to part of said user interfaces;

timing information storage section configured to store timing information related to said user operation and release of user operation, in response to said user

operation and release of user operation against said connection designation section; and

searching section configured to search over said communication medium and specify as a communication counterpart an apparatus sharing timing information related to said user operation and said release of user operation.

6. The data communication apparatus according to claim 5, wherein said searching section comprises:

packet transmitter configured to collectively transmit connection request packets including timings of said user operation and said release of user operation in response to said release of user operation against said connection designation section;

packet receptor configured to receive connection request packets from another data communication apparatus within a time interval from said release of user operation against said connection designation section; and

communication counterpart identification section configured to read timing information related to user operation and release of user operation from a connection request packet received from said other communication apparatus; compare said timing information related to user operation and release of user operation stored in said timing information storage section; and perform mutual identification between apparatuses upon matching as a result of said comparison.

7. The data communication apparatus according to claim 6, wherein said connection request packets include one's

own network identification information and time interval between user operation and release of user operation.

8. The data communication apparatus according to claim 6, wherein said communication counterpart identification section identifies whether or not a transmission source of a connection request packet constitutes a communication counterpart upon determining whether or not a difference of a time interval from releasing of user operation of said connection designation section of one's own device to a time of receiving a connection request packet is less than a limit of error; and determining whether or not a difference between a time interval from an operation of said connection designation section stored in said timing information storage section to said release of user operation and said time interval included in said received connection request packet constitutes a limit of error.

9. The data communication apparatus according to claim 5, wherein said user operation against said connection designation section is processed as a request for network connection if said user operation against said connection designation section differs from a usual interface operation.

10. The data communication apparatus according to claim 5, wherein said user operation against said connection designation section is processed as a usual interface operation if a time interval from said user operation against said connection designation section to the user

releasing said apparatus is less than a limit value, and is processed as a network connection request if said time interval exceeds said limit value.

11. The data communication apparatus according to claim 5, further comprising collision detector configured to detect a collision in response to arrival of two or more connection request packets within a prescribed time from release of user operation against said connection designation section.

12. The data communication apparatus according to claim 11, further comprising connection request retry section configured to request retrial of operation of said connection designation section in response to detection of collision.

13. The data communication apparatus according to claim 12, further configured to store all network identification information included in each connection request packet received at time of collision; and to accept only a connection request packet from a transmission source possessing stored network identification information at time of retrying said connection request.

14. The data communication apparatus according to claim 6, further comprising generator configured to generate a public key under a public key encryption method; wherein said packet transmitter transmits a connection request packet including said public key.

15. The data communication apparatus according to claim 5, further comprising provider configured to provide feedback to the user in response to identification of a communication counterpart by said communication counterpart identification section.

16. A data communication method for performing data communication via a communication medium, comprising:

connection designation step of designating network connection for user operation and release of user operation against a user interface;

timing information storing step of storing timing information related to said user operation and release of user operation of said connection designation step; and

searching step of searching over said communication medium and specifying as a communication counterpart an apparatus sharing timing information related to said user operation and said release of user operation.

17. A method of establishing connection between information apparatuses, comprising:

first acquisition step of acquiring a first time difference comprising a difference between a first time on which a first physical operation is carried out on an operation section utilized for operation of a first information apparatus and a second time on which a second physical operation is carried out on said operation section;

second acquisition step of acquiring a second time difference comprising a difference between a third time

corresponding to said first time and generated on a second information apparatus, and a fourth time corresponding to said second time; and

connection establishing step of establishing connection between said first and said second information apparatuses based on said first and said second time differences; wherein

said first and said second physical operations comprise a series of operations performed against said operation section.

18. The method according to claim 17, further comprising:

at least one of outputting step of outputting information of a first type for generating an encryption key in receptible form for said second apparatus, and a third acquisition step of acquiring information of a second type for generating an encryption key outputted by said second information apparatus; and

communication step of performing communication utilizing encryption process based on said encryption key, after establishment of said connection.

19. A method of establishing connection between information apparatuses, comprising:

first acquisition step of acquiring a first time on which a first physical operation is carried out on an operation section utilized for operation of a first information apparatus;

second acquisition step of acquiring a second time on which a second physical operation is carried out on said operation section;

third acquisition step of acquiring a third time and a fourth time corresponding to said first time and said second time, and generated on a second information apparatus; and

connection establishing step of establishing connection between said first and said second information apparatuses based on said first to fourth times; wherein

said first and said second physical operations comprise a series of operations performed against said operation section.

20. A connection establishing apparatus for establishing connection between information apparatuses, comprising:

operation section configured to enable a user to perform a physical operation;

first acquisition section configured to acquire a first time difference comprising a difference between a first time on which a first physical operation is carried out on said operation section utilized for operation of a first information apparatus and a second time on which a second physical operation is carried out on said operation section;

second acquisition section configured to acquire a second time difference comprising a difference between a third time corresponding to said first time and generated on a second information apparatus, and a fourth time corresponding to said second time; and

connection establishing section configured to establish connection between said first and said second information apparatuses based on said first and said second time differences; wherein

said first and said second physical operations comprise a series of operations performed against said operation section.

21. A connection establishing system for establishing connection between information apparatuses, comprising:

first acquisition step of acquiring a first time difference comprising a difference between a first time on which a first physical operation is carried out on an operation section utilized for operation of a first information apparatus and a second time on which a second physical operation is carried out on said operation section;

second acquisition step of acquiring a second time difference comprising a difference between a third time corresponding to said first time and generated on a second information apparatus, and a fourth time corresponding to said second time; and

connection establishing step of establishing connection between said first and said second information apparatuses based on said first and said second time differences; wherein

said first and said second physical operations comprise a series of operations performed against said operation section.

22. A computer program written in computer-readable form for making a computer execute a process of establishing connections between information apparatuses, the process comprising:

first acquisition step of acquiring a first time difference comprising a difference between a first time on which a first physical operation is carried out on an operation section installed on an apparatus and a second time on which a second physical operation is carried out on said operation section;

a second acquisition step of acquiring a second time difference comprising a difference between a third time corresponding to said first time and generated on an information apparatus constituting a connection counterpart, and a fourth time corresponding to said second time; and

connection establishing step of establishing connection between said first and said second information apparatuses based on said first and said second time differences; wherein

said first and said second physical operations comprise a series of operations carried out against said operation sections.

23. A data communication system for enabling a plurality of communication apparatuses to perform data communication via a communication medium, the data communication system comprising:

timing information sharing means for sharing timing information related to a user operation and release of user operation between devices performing mutual

communication, in response to user operation and release of user operation performed at a same timing against respective connection designation section of apparatuses constituting respective counterparts for communication; and

searching means for searching over said communication medium and specify as a communication counterpart an apparatus sharing timing information related to said user operation and said release of user operation; wherein

each of said communication apparatuses includes a user interface for accepting a user operation, and said user operation and release of user operation related to part of said user interfaces is allocated to a connection designation means for designating network connections.